Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Promoting the Deployment of 5G Open Radio Access Networks	)	GN Docket No. 21-63
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COMMENTS OF SAMSUNG ELECTRONICS AMERICA, INC.

I. INTRODUCTION

Samsung Electronics America, Inc. ("Samsung") submits these comments in response to the above-captioned *Notice of Inquiry* ("*NOI*")[1] seeking public input on promoting the deployment of 5G Open Radio Access Networks. Samsung welcomes this opportunity to support the efforts of the Federal Communications Commission ("Commission") to develop information that can inform carriers' decision-making as they examine which equipment and services to deploy in next generation networks. Samsung has made major investments in the U.S. and has become a global leader in 5G, across network equipment, semiconductor chips, mobile devices, services, and planning tools, from a trusted and secure supply chain. As Samsung and others across industry work toward standardizing interoperability in the RAN and beyond, the Commission can support this evolution by encouraging industry-led interoperability organizations or agreements and advancing a diverse global market of trusted suppliers in the U.S. and allied countries.

[1] *See Promoting the Deployment of 5G Open Radio Access Networks*, Notice of Inquiry, FCC 21-31, GN Docket No. 21-63 (*"NOI"*).

II. SAMSUNG'S OPEN STANDARDS-BASED 5G LEADERSHIP

The competitive benefits and architectural flexibility afforded by Open RAN complement the benefits that will come from 5G. Samsung has been an instrumental contributor and partner in the U.S. effort to rapidly deploy 5G. Samsung provided the equipment for the launch markets of Verizon 5G Home, a fixed wireless broadband service that launched in October 2018 as the world's first commercial 5G service.[2] In 2019, we supported the launch of 5G New Radio mobility networks for Verizon[3] and Sprint.[4] We also have partnerships to supply 5G equipment to AT&T[5] and US Cellular.[6] And in September 2020, Samsung and Verizon signed a five year, $6.6 billion strategic agreement to supply network equipment and services for Verizon's next-generation network.[7]

Samsung is also supplying 5G network equipment to major carriers around the world, including in key markets like Korea, Japan, Canada, and New Zealand. We are active in Europe, for example by supporting the first 5G Standalone Core network trial in the Czech Republic with

[2] https://news.samsung.com/us/samsung-supports-verizons-5g-home-launch-5g-end-end-solutions/

[3] https://news.samsung.com/us/verizon-samsung-5g-network-motorola-qualcomm-achieves-4-2-gbps/

[4] https://news.samsung.com/us/samsung-technology-provides-foundation-sprint-mobile-5g-network-chicago/

[5] https://news.samsung.com/us/att-selects-samsung-technology-supplier-cbrs-5g-initiatives/

[6] https://news.samsung.com/us/us-cellular-selects-samsung-5g-4g-lte-network-solutions/

[7] https://news.samsung.com/global/samsung-electronics-announces-third-quarter-2020-results

Deutsche Telekom.[8] Last month, Samsung announced an expansion of its presence in Japan with leading operators KDDI and NTT DOCOMO.[9] Notably, Samsung will support DOCOMO with an O-RAN-compliant 5G solution.[10] Also last month, SaskTel, an information and communications technology provider in Canada, joined Canadian operators Videotron and TELUS by selecting Samsung for its 5G network deployment.[11]

Samsung is a leader in 3GPP and the O-RAN Alliance. The company also pioneered cross-vendor RAN interoperability, even before the founding of the O-RAN Alliance in 2018 and subsequent development of O-RAN specifications. Samsung also recently announced its latest 5G advancement with the commercial launch of our vRAN 2.0, the first fully virtualized commercial 5G RAN in the US, in the Verizon network.[12]

III. POLICY RECOMMENDATIONS TO FACILITATE INDUSTRY-LED DEVELOPMENT OF OPEN RAN

Samsung supports the Commission's efforts to raise awareness of the benefits of Open RAN standards. A more open and interoperable network architecture provides numerous benefits to operators. First, it drives competition among vendors in the network. Second, it gives service

[8] https://news.samsung.com/global/samsung-and-deutsche-telekom-complete-first-5g-sa-trial-in-czech-republic

[9] https://news.samsung.com/global/samsung-collaborates-with-ntt-docomo-on-5g; https://news.samsung.com/global/samsung-initiates-kddis-5g-network-rollout-on-700mhz

[10] https://news.samsung.com/global/samsung-collaborates-with-ntt-docomo-on-5g

[11] https://news.samsung.com/global/sasktel-selects-samsung-for-5g-network-deployment

[12] https://news.samsung.com/global/samsung-expands-5g-technology-leadership-with-fully-virtualized-commercial-5g-ran

providers the flexibility to select best-in-class components for radio and baseband functions from a diversity of sources. And finally, it will simplify future technology migration by allowing a more modular upgrade path--for example, replacing baseband units while leaving radio units in place.

We are pleased that the U.S. government is raising awareness about Open RAN's benefits, and appreciate Commissioners' recognition that the market should lead Open RAN adoption with support from government partners as opposed to mandates or requirements, for example, in Universal Service Fund criteria.[13] As it has recognized repeatedly throughout decades of telecommunications policymaking, the Commission should not pick technologies or constrain operator's ability to choose the technologies that best meet their specific requirements.[14] Open RAN facilitates those choices, but it does require attention and expertise on the part of the operator and its vendor(s). Samsung knows from direct experience that the Open RAN standards are relatively new, not yet as easy to "plug and play" as, for example, connecting your PC to your printer. Multi-vendor interoperability still takes extra time and effort, which is of course a normal phase of technology evolution.

[13] Commissioner Geoffrey Starks has said "no carrier should be forced to adopt [Open RAN]," and the Commission should play a role in encouraging "carriers to consider a technology that might have been overlooked otherwise." (Remarks of Commissioner Geoffrey Starks, Forum on 5G Open Radio Access Networks (Sept. 14, 2020) at 1).

[14] *See e.g.* William Kennard, Connecting the Globe, at IX-5 (1999) (noting "A policy of technological neutrality provides for the equitable treatment of different technologies and spurs innovation. … Governments should seek to promote competition among various technologies and industry segments with the goal of accelerating innovation and the deployment of advanced services. Simply put, regulators should not be in the business of selecting winners or losers of information technologies. With a policy of technological neutrality, the real winners will be consumers, as they will benefit from lower prices, improved quality, and more innovation.")

That is why the U.S. government should help the ecosystem accelerate the process and lower these hurdles by encouraging industry-led interoperability organizations or agreements. As Acting Chairwoman Jessica Rosenworcel has noted, the Commission should support such industry-led interoperability organizations or agreements in coordination with other government partners rather than establish duplicative efforts.[15].

The *NOI* asks a series of questions about how Open RAN will bolster the competitive advantage of U.S. companies over "traditional network equipment vendors."[16] However, viewing Open RAN through this narrow lens is in fact detrimental to U.S. national security interests. Widespread deployment of Open RAN will no doubt present beneficial opportunities for a wider range of U.S.-based companies to engage in the communications marketplace, but to adequately supply their rapidly developing U.S. domestic 5G and next generation networks, U.S. carriers will need a diversity of trusted, competitive, innovative suppliers at global scale, not limited solely to U.S.-headquartered vendors. Furthermore, a competitive global market benefits U.S.-based companies abroad and will serve U.S. economic and security interests much more than siloed national markets. Thus, U.S. policy should expressly advance a diverse, trusted market of suppliers based in the United States and allied countries. A global market of trusted suppliers competing to deliver standards-based solutions has the scale and diversity to support critical U.S. infrastructure.

[15] Remarks of Commissioner Jessica Rosenworcel Mobile World Congress Americas, (Oct. 22, 2019) at 4.

[16] *NOI* at 16350-51.

III. CONCLUSION

Samsung appreciates the Commission's efforts to promote deployment of secure and trusted networks as well as to raise awareness of the benefits of Open RAN.

Respectfully submitted,

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